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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/657,482 | 09/08/2003 | Hilary S. Lackritz | LWBAP101USA | 2664 |
| 23623 | 7590 | 11/17/2004 | EXAMINER | |
| AMIN & TUROCY, LLP 1900 EAST 9TH STREET, NATIONAL CITY CENTER 24TH FLOOR, CLEVELAND, OH 44114 | | | ROSENBERGER, RICHARD A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2877 | |

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,482

Applicant(s)

LACKRITZ ET AL.

Examiner

Richard A Rosenberg

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>08/09/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 2 and 18-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 2 and 18 claim a combination including an “arrayed waveguide grating spectrometer”, claims 19-21 are dependent from claim 18 and thus include this feature through dependency. The specification, though discussing broadly the use of an arrayed waveguide grating spectrometer (or AWG spectrometer), the specification does not disclose how to make and use such a AWG spectrometer beyond the mere placement of the AWG spectrometer in the system. The specification does not disclose the structure of this type of spectrometer, and does not disclose its manner of operation is sufficient detail to allow those in the art to make and use the spectrometer.

It is of course correct that material that is otherwise well-known in the art needs not be disclosed in detail in an application. In the previous office action it was taken by the examiner, as explicitly stated in that action giving the basis for that

assumption, that arrayed waveguide grating spectrometers were otherwise known in the art and that those in the art, using their ordinary knowledge of what is otherwise known in the art, could make, use, or otherwise obtain an AWG spectrometer, and thus the disclosure was taken as sufficient. However, the response filed 19 August 2004 denies that AWG spectrometers are otherwise known in the art; that "[t]here is no basis for the Examiner's implication that an arrayed waveguide grating spectrometer is a spectrometer that is known in the art" [remarks of 19 August 2004, page 5, lines 5-6]. As the instant disclosure does not describe how to make an use such a AWG spectrometer, and the record now is clear that applicants considers the arrayed waveguide grating spectrometer *per se* to be a part of their invention, the disclosure as to this element is clearly incomplete and inadequate under 35 USC 112, first paragraph.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-17, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoppe et al (US 6,570,657) in view of Naya (US 5,917,607), what

is presented in the instant specification as being known in the prior art, and Verber et al (US 4,394,060).

Hoppe et al shows a known surface plasmon system with a plurality of test areas (C1, C2, C3) and a scanning arrangement (5) for sequentially directing light to the different areas. Naya also shows this, using a different scanning arrangement. It would have been obvious to use any known scanning means to thus sequentially direct the light to the different areas because it is the sequential presentation of the light to the different test areas and not the particular scanning means that is of functional importance to the operation of the device; the difference between the scanning means of Hoppe et al and of Naya demonstrates that those in the art realize that the scanning means can be varied in form while maintaining the function of sequential testing. Among the known scanners are various scanners in the form of optical integrated circuits; Verber et al is a single example of such a known scanner. Verber et al discloses the optical integrated circuit scanner disclosed therein as a substitute for a moving-mirror type scanner; see column 1, lines 11-16, 45-50, and disclosed the advantages including being very compact, with a high scanning speed and sweep rate, and not requiring precise adjustment during assembly (column 1, 46-50). It would have been obvious to use such a known scanner because it is known to perform the function of scanning with the scanners of Hoppe et al and Naya perform and is thus a recognized functional equivalence and to obtain the art-recognized advantages of such a known scanner.

Both Hoppe et al and Naya et al teach that the sample may be a binding pair. The exact number of test areas can be selected by those in the art as appropriate for the application at hand. Those in the art know how to choose appropriate wavelengths of use in such surface plasmon tests, and known how to select appropriate materials for the surface plasmon test, Naya mentions that the metal film may be "gold, silver or the like (column 4, lines 36-36).

5. The remarks filed 19 August 2004 have been considered but have not been found to be persuasive.

The remarks do not appear to address the invention *as claimed*. As set forth in the statement of the rejection above and in the previous office action, those in the art are aware that known scanning means can be used to direct light to a plurality of regions in a surface plasmon resonance sensor (see Hoppe et al and Naya), and that there are a known scanning systems that comprise an optical integrated circuit (see Verber et al). The use of a known scanning system for its known scanning function in a known system using known scanning systems would have been obvious. Claim 1 does not require more.

It is noted that both the previous action and the action above clearly state both how the elements of Verber (a known scanner) and the elements of Hoppe et al and Naya (surface plasmon resonance systems using known scanners to direct the light to different measuring regions) work together (the scanner of Verber acts in

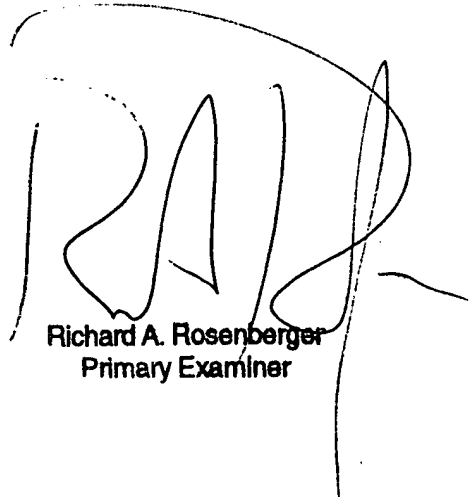
its disclosed manner to direct light to different measuring regions as taught by Naya and Hoppe et al). It is also noted that both the previous office action and the action above explicitly sets forth the motivation for the combination (the substitution is explicitly taught by Verber, and there are art-recognized advantages including compactness, and high scanning speed and sweep rate.)

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Rosenberger whose telephone number is (571) 272-2428. The examiner can normally be reached on Monday through Friday during the hours of 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. A. Rosenberger
10 November 2004



Richard A. Rosenberger
Primary Examiner